

FIG. 1

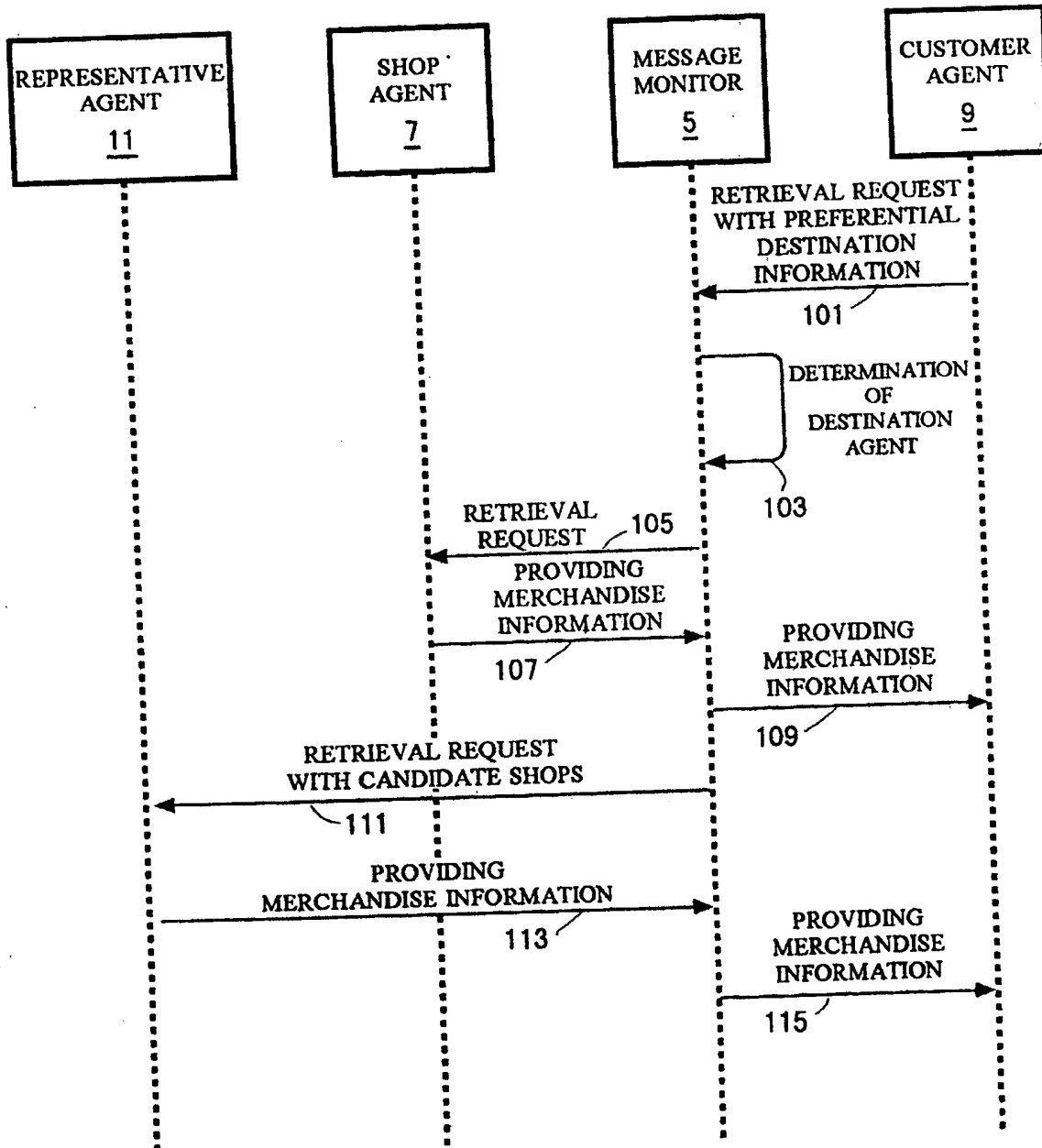


FIG. 2

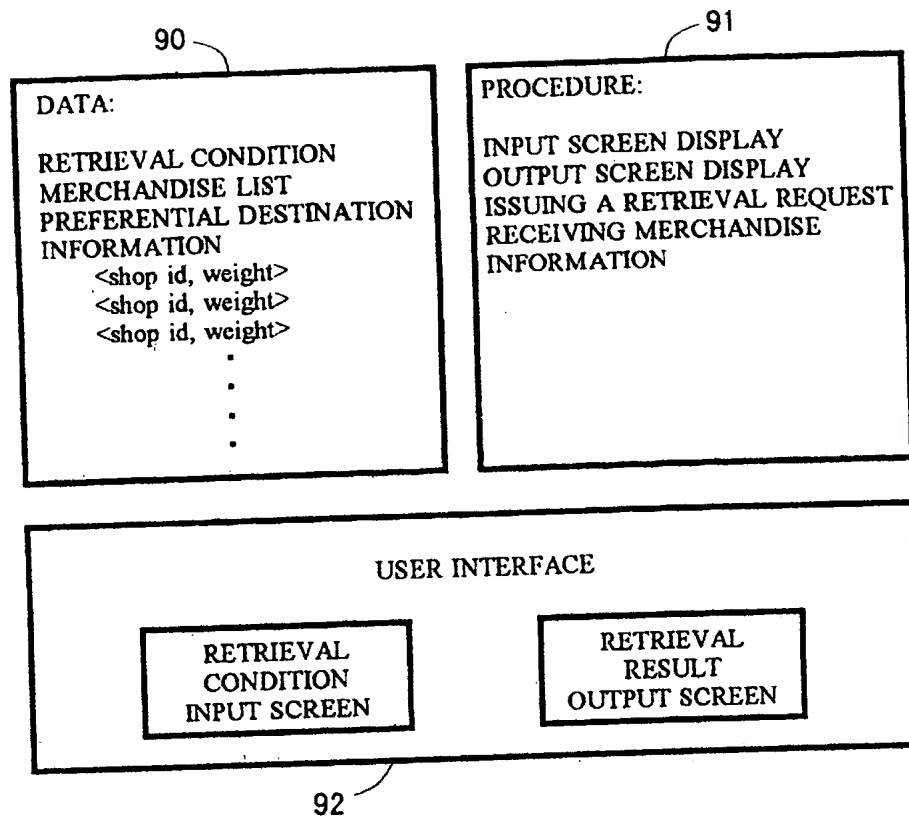


FIG. 3

☐ INPUT SCREEN DISPLAY

Specify Requirement

CATEGORY

Destination

MAX PRICE

Preference

Search Cancel

Detailed description: This is a screenshot of a software window titled 'INPUT SCREEN DISPLAY'. At the top left is a small square icon followed by the title. Below the title is the instruction 'Specify Requirement' in italics. There are four labels on the left: 'CATEGORY', 'Destination', 'MAX PRICE', and 'Preference'. Each label is followed by a horizontal text input field. At the bottom of the window are two buttons: 'Search' and 'Cancel'.

FIG. 4

☐ OUTPUT SCREEN DISPLAY

Search Results

Agent	Destination	Airline	Price
Agent-1	HNL	JL	¥100,800
Agent-2	HNL	UA	¥98,000
⋮	⋮	⋮	⋮

DETAIL BUTTON

DETAIL BUTTON

FIG. 5

```

Message
  <Message 名>
    <parameter name>=<value>
    <parameter name>=<value>
    <parameter name>=<value>
    .
    .
    .
Preference
  <shop id, weight>
  <shop id, weight>
  <shop id, weight>
  .
  .
  .

```

(a)

```

Message
  RequestTravelGoods
    Requirements=
      (CATEGORY=AirTicket and
       Destination=Honolulu and
       PRICE<500000)
    MaxSize=20
  Preference
    Agent-5, 20
    Agent-4, 10

```

(b)

FIG. 6

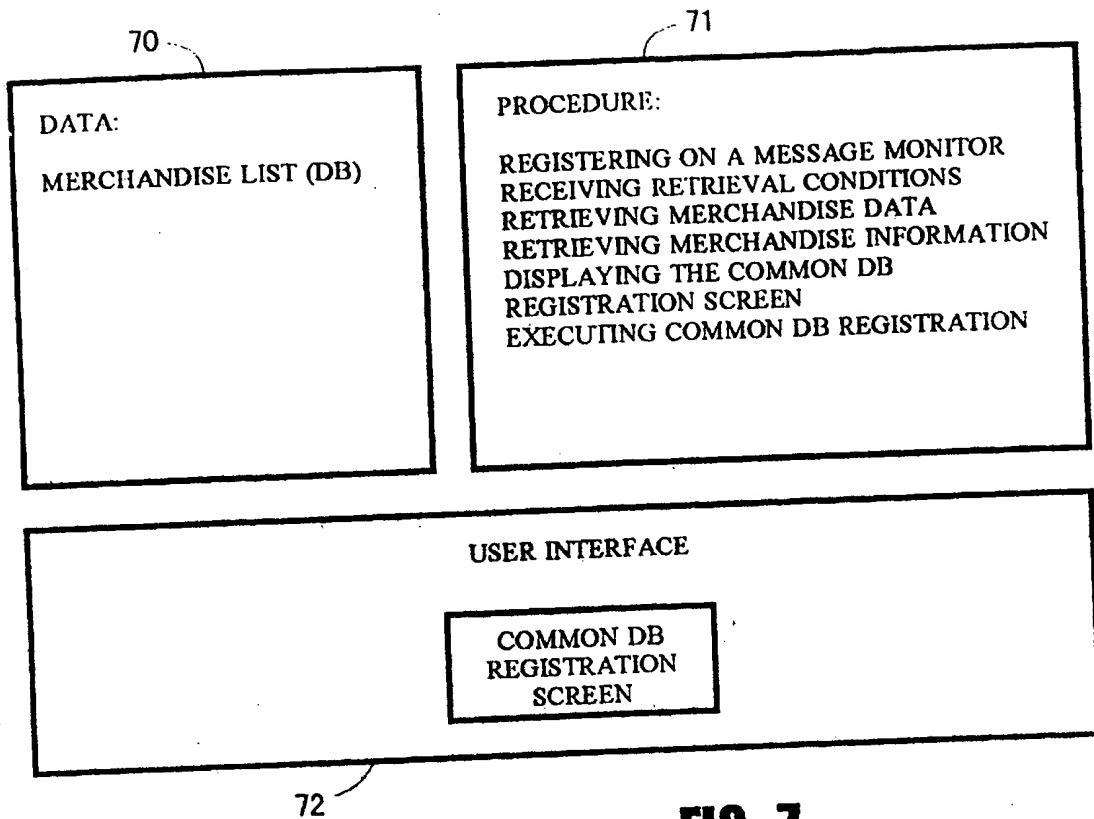


FIG. 7

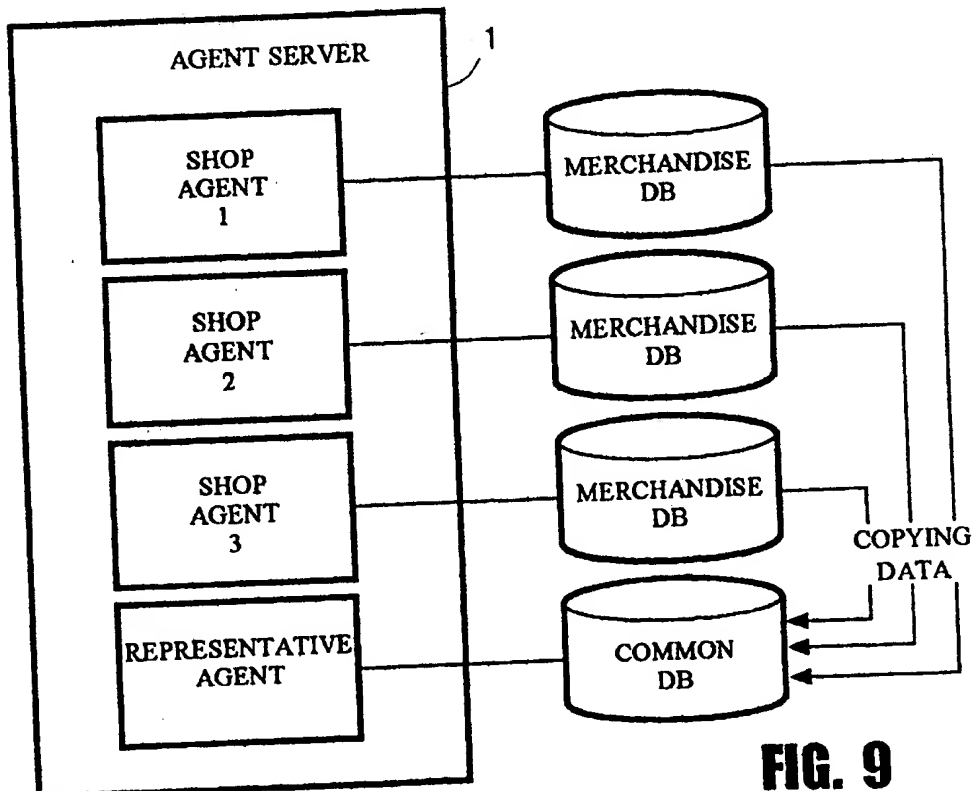


FIG. 9

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6547434-06649

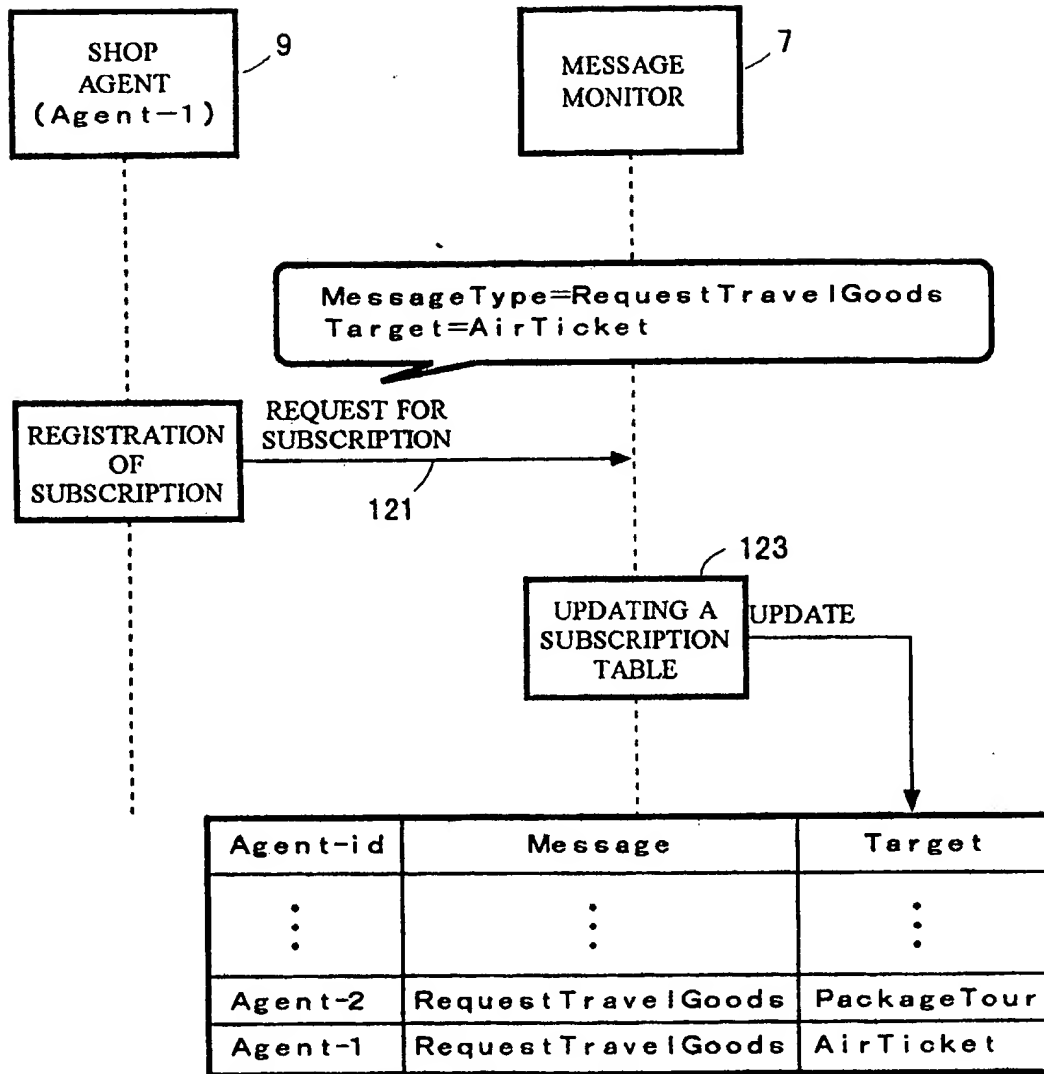


FIG. 8

(a) DB Scheme
Column1:<type>
Column2:<type>
Column3:<type>
Column4:<type>
.
.
.
Column-i:<type>
Common:boolean

(b) Scheme for AirTicket
Departure:String
Destination1:String
Destination2:String
Destination3:String
Airline:String
Price:Integer
TicketType:String
Class:String
Common:boolean

FIG. 10

(a) MessageType: Candidate message type
MaxNumber: The maximum number of agents to which a message is delivered
Mandatory: Agents to which a message must be delivered
Priority: Weighting for delivering a message to remaining agents
(represented by a set of an agent id and weight)

(b) MessageType: RequestAirTicket
MaxNumber: 3
Mandatory: agent-3, agent-4
Priority:
 <Agent-1, 10>
 <Agent-2, 30>
 <Agent-5, 50>

FIG. 11

Message Types

RequestTravelGoods [A, B]
Requirement as QueryType
Maxsize as integer
ProvideExactGoods [B, A]
Goods as Collection<Thing>
RecommendGoods [B, A]
Goods as Collection<Thing>

Category

AirTicket

Super:TravelGoods
Departure:String
Destinations:Collection<String>
Airline:String
Price:Integer
TicketType:Enum<String> [Fix, Open, FixOpen]
Class:Enum<String> [Y, C, F, P]

FIG. 12

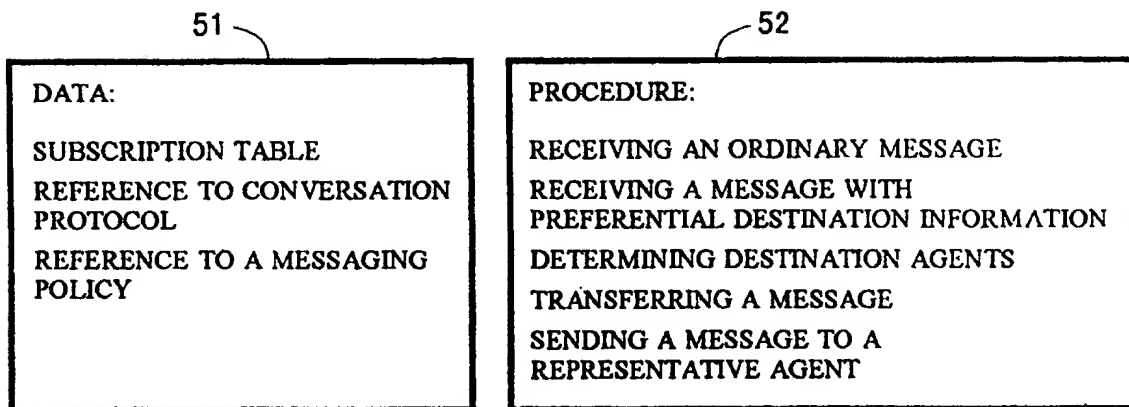


FIG. 13

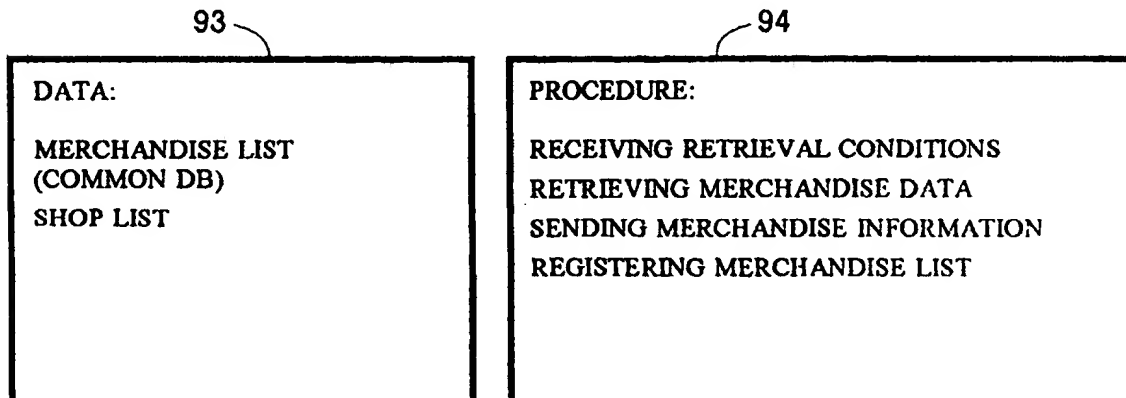


FIG. 17

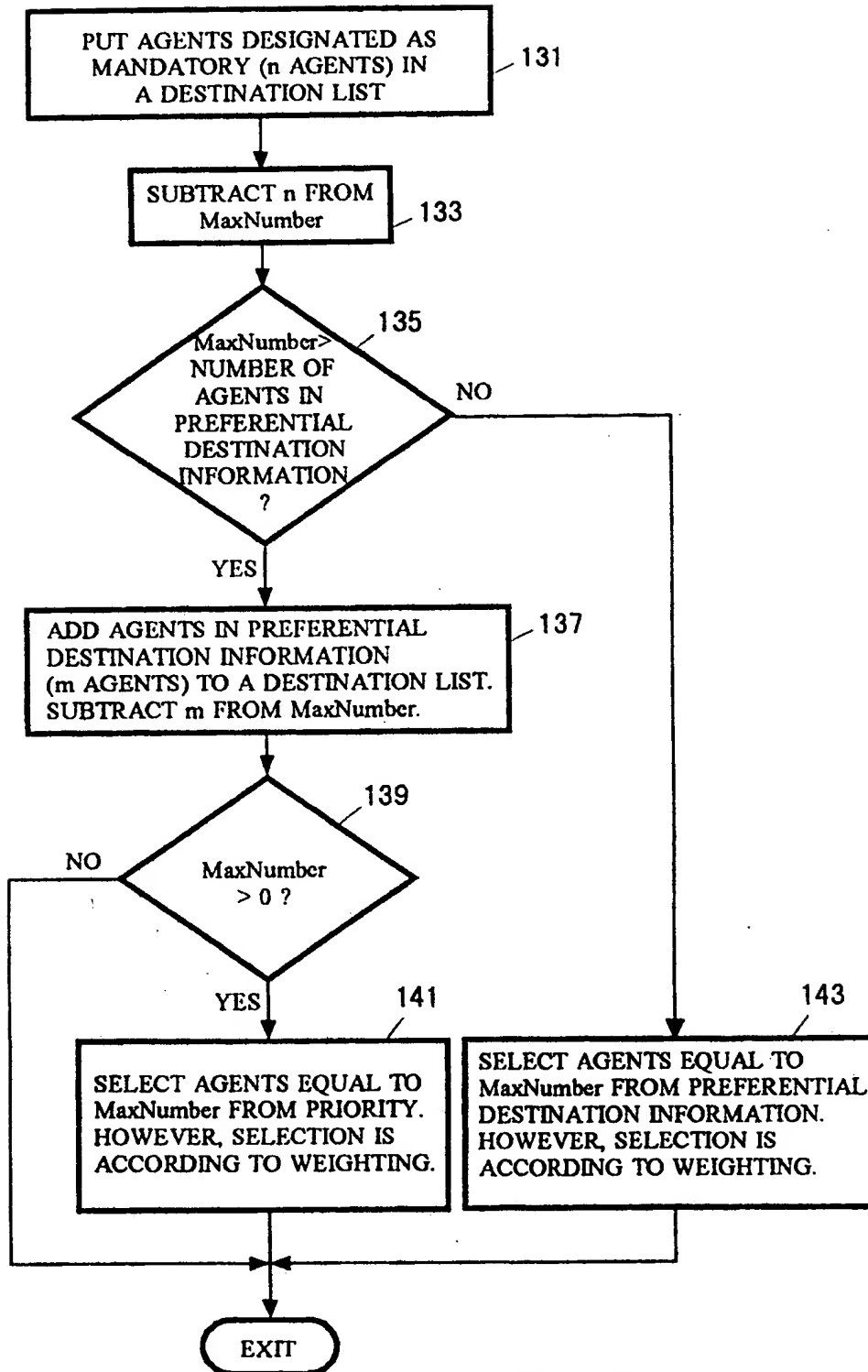


FIG. 14

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(a)

MESSAGE WITH PREFERENTIAL
DESTINATION INFORMATION

Message
RequestTravelGoods
Requirements=
 (CATEGORY=AirTicket and
 Destination=Honolulu and
 PRICE<500000)
MaxSize=20
Preference
 Agent-5, 20
 Agent-4, 10

(b)

MESSAGING POLICY

MessageType:RequestAirTicket
MaxNumber:3
Mandatory:agent-3, agent-4
Priority:
 <Agent-1, 10>
 <Agent-2, 30>
 <Agent-5, 50>

(c)

DESTINATION LIST

Agent-3
Agent-4
Agent-5

FIG. 15

FORMAT

Message
 Message
List
 List of agent

(a)

EXAMPLE

Message
RequestTravelGoods
Requirements=
 (CATEGORY=AirTicket and
 Destination=Honolulu and
 PRICE<500000)
MaxSize=20
List
 Agent-1
 Agent-2

(b)

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DB Scheme

Column1:<type>
Column2:<type>
Column3:<type>
Column4:<type>
.

(a)

Columni:<type>
Agent-id:String

Scheme for AirTicket

Departure:String
Destination1:String
Destination2:String
Destination3:String
Airline:String
Price:Integer
TicketType:String
Class:String
Agent-id:String

(b)

FIG. 18

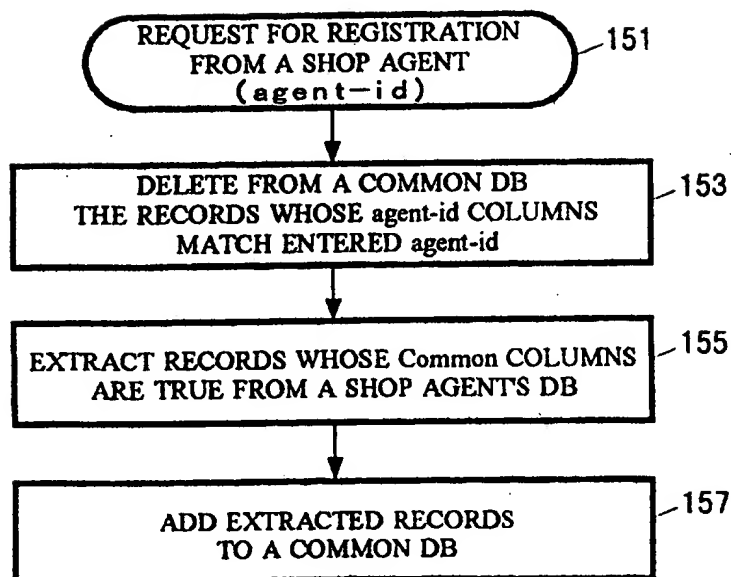


FIG 19

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